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WO 2005/068949 A1

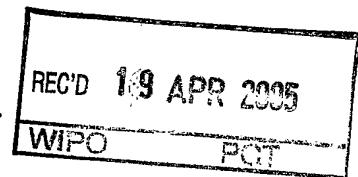
(54) Title: METHOD OF PROCESSING OSCILLATORY RESPONSE DATA FROM A RESONANT SYSTEM

(57) **Abstract:** A method, which permits the transformation of non-stationary response measurements into stationary data for analysis, is provided. Many standard analysis techniques, particularly for oscillatory responses, are based on stationary data, and the method allows these techniques to be performed on originally non-stationary data. The method may be a method of processing oscillatory response data from a resonant system comprising: obtaining data measuring an oscillatory response of the system; estimating the variation in natural frequency of a mode of said response; filtering the data around a selected frequency to obtain a filtered response; determining a carrier signal whose frequency variation with respect to time is equal in magnitude to said estimated variation in natural frequency; and modulating the amplitude of said carrier signal using said filtered response to obtain a modulated carrier signal. A corresponding system for processing oscillatory response data is also provided.

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



Applicant's or agent's file reference SCGCP6267017	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/GB2004/005055	International filing date (day/month/year) 02/12/2004	(Earliest) Priority Date (day/month/year) 15/01/2004
Applicant		

ROLLS-ROYCE PLC

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box II).

3. **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

METHOD OF PROCESSING OSCILLATORY RESPONSE DATA FROM A RESONANT SYSTEM

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.